



**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY**

REGION 4

ATLANTA FEDERAL CENTER  
61 FORSYTH STREET  
ATLANTA, GEORGIA 30303-8960

**JUN 06 2016**

Mr. Ron Gore  
Director  
Alabama Department of Environmental Management  
P.O. Box 301463  
Montgomery, Alabama 36130-1463

Dear Mr. Gore:

Thank you for submitting Alabama's five-year ambient air monitoring network assessment (network assessment) on July 1, 2015. The network assessment is required by 40 Code of Federal Regulations (CFR) § 58.10(d). The regulation requires that the network assessment, at a minimum, determine "if the network meets the monitoring objectives defined in appendix D to this part, whether new sites are needed, whether existing sites are no longer needed and can be terminated, and whether new technologies are appropriate for incorporation into the ambient air monitoring network. The network assessment must consider the ability of existing and proposed sites to support air quality characterization for areas with relatively high populations of susceptible individuals (e.g., children with asthma), and, for any sites that are being proposed for discontinuance, the effect on data users other than the agency itself, such as nearby states and tribes or health effects studies." Comments on how these requirements are being met are provided below.

## **1. Monitoring Objectives**

The monitoring objectives defined in 40 CFR Part 58, Appendix D are comprised of many factors, including, but not limited to, minimum monitoring requirements. All monitoring objectives should be evaluated in order to determine if the current network is adequate. Appendix D states:

"In order to support the air quality management work indicated in the three basic air monitoring objectives, a network must be designed with a variety of types of monitoring sites. Monitoring sites must be capable of informing managers about many things including the peak air pollution levels, typical levels in populated areas, air pollution transported into and outside of a city or region, and air pollution levels near specific sources. To summarize some of these sites, here is a listing of six general site types:

- (a) Sites located to determine the highest concentrations expected to occur in the area covered by the network.
- (b) Sites located to measure typical concentrations in areas of high population density.
- (c) Sites located to determine the impact of significant sources or source categories on air quality.
- (d) Sites located to determine general background concentration levels.

- (e) Sites located to determine the extent of regional pollutant transport among populated areas; and in support of secondary standards.
- (f) Sites located to measure air pollution impacts on visibility, vegetation damage, or other welfare-based impacts.”

The network assessment submitted by the Alabama Department of Environmental Management (ADEM) found that, in general, the network provides adequate coverage for areas of higher population density. The assessment used a ranking system to determine the relative importance of each monitor. Those receiving greater weight were “determined to have higher importance in the network” and, therefore, should be maintained.

Within the assessment’s analyses, existing sites were given a weighted score and ranked from highest importance to lowest. While several monitors received lower rankings, conclusions were made to not shut any of them down at this time. The various monitoring objectives of the sites did not appear to be evaluated as part of the pollutant-specific assessments; however, the ADEM determined that minimum monitoring requirements were met in each area and that the EPA has approved the network annually.

## **2. New Monitoring Sites**

Network assessments are required to determine, among other things, whether new monitoring sites should be established over the next five years. Due to newly promulgated regulations, such as rules concerning sulfur dioxide (SO<sub>2</sub>) data collection and Photochemical Assessment Monitoring Stations (PAMS), the state and local agencies should be planning for additional monitoring sites in their respective network assessments.

The EPA proposed the SO<sub>2</sub> Data Requirements Rule (DRR) on May 13, 2014, and finalized the rule on August 10, 2015. The proposed rule would require the characterization of the air quality near large SO<sub>2</sub> sources by conducting ambient air monitoring or modeling. The ADEM did not provide any discussion of these proposed requirements and whether additional monitoring will need to be added. We have since had discussions with the ADEM staff and are working out a path forward to implement the DRR in the state by January 1, 2017. The ADEM must provide the public a 30-day comment period for any changes to its monitoring network.

With the recent promulgation of a new ozone national ambient air quality standards (NAAQS) on October 1, 2015, the EPA finalized changes to the PAMS program. PAMS measurements will be required to be collocated with existing NCore sites in areas with populations of 1 million or more irrespective of ozone (O<sub>3</sub>) NAAQS attainment status. The Jefferson County Department of Health will be required to conduct PAMS measurements at its North Birmingham NCore site effective June 1, 2019. This is the only Core Based Statistical Area in the state required to have PAMS measurements.

The ADEM network assessment identified all sites in its network including the ozone monitor operated by the EPA as part of EPA’s CASTNET network ([www.epa.gov/castnet](http://www.epa.gov/castnet)). These sites have been approved by the EPA in Alabama’s network plan. The ADEM network assessment included the results of analyses conducted to help identify whether new sites are needed. These analyses were used to form the ADEM recommendations. Population, emission, area maps and correlation plots informed most of the final conclusions to determine which areas in the state were suitable for monitoring sites used to meet federal monitoring requirements, and to

determine whether any spatial gaps or gaps in monitoring in areas of sensitive and susceptible population groups exist.

The only finding in the assessment was that, if resources allow, the addition of an O<sub>3</sub> site in the Auburn area was likely. However, in the end the ADEM concluded that no new sites would be established. We would certainly support special purpose monitoring in the Auburn area to see how well the ozone levels correlate with monitors already operating in Montgomery and Phenix City. Also, resources may be better spent on special purpose monitoring efforts in the eastern part of your state between Birmingham and Atlanta. We would also like to note that in future assessments and annual network plan submittals, the ADEM should include descriptions of its PAMS and SO<sub>2</sub> networks to reflect operational changes that have resulted or will result from changes in the regulatory requirements.

### **3. Existing Site Evaluations**

The network assessment did not include any information on whether the siting criteria in 40 CFR Part 58, Appendix E are being met at its monitoring sites. The agency should provide for each of its sites, at a minimum, the date of last inspection, updated site photos in the four cardinal directions, a statement on whether the current conditions meet siting criteria, and any corrective actions taken or planned if the siting criteria are not met. This information can also be submitted as part of the annual network plan.

### **4. Incorporation of New Technology**

The network assessment did not address whether new technologies have been or will be introduced into its network. At the time this assessment was written, the O<sub>3</sub> monitoring rule was not finalized and there was uncertainty about where additional enhanced O<sub>3</sub> monitoring areas would be identified. The photochemical assessment monitoring as finalized will occur at the Birmingham NCore site effective June 1, 2019. The EPA is working on outreach and training materials for affected agencies and will begin communication efforts after this year's national ambient air monitoring conference in August.

### **5. Network Adequacy in Areas with Large Populations of Susceptible Individuals**

The network assessment did not address whether the current ambient air monitoring network adequately characterizes air quality in areas with large populations of susceptible individuals. The ADEM concluded that its network meets the minimum requirements and is adequately designed to cover areas of higher populations and emissions. While "area served maps" and general population statistics were included in the assessment, there was no analysis or discussion on whether the current network is adequately situated to cover susceptible populations in these areas. More rigorous analyses of potential spatial gaps for susceptible populations should be undertaken in future assessments.

### **6. Impacts of Monitor Discontinuance on Data Users or Health Studies**

Since no monitors were proposed for discontinuation, the network assessment did not discuss whether the discontinuance of one or more monitors may impact data users or health studies. In developing its network plan each year, we encourage the ADEM to reach out specifically to data users.

## **7. Lead (Pb) Source Monitoring**

The ADEM provided a general discussion regarding monitoring near lead sources that was also found in the annual network plan submittal. The network assessment includes information about one facility that exceeds the 0.5 tons per year threshold based on the latest 2011 national emissions inventory. The ADEM plans to continue operating the monitor near that source. No additional Pb source monitoring sites are required at this time nor are any being proposed in this assessment.

## **8. Waiver Requests**

Any waiver of 40 CFR Parts 50 and/or 58 regulatory requirements must be renewed during each 5-Year Assessment unless otherwise specified to be renewed annually during the network plan process. This includes waivers of:

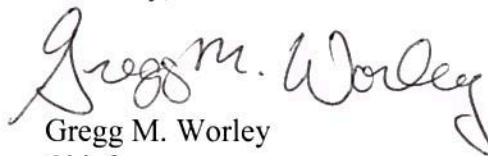
- a. Lead source monitoring
- b. Continuous PM<sub>2.5</sub> FEM comparability (NAAQS Exclusion).
- c. Siting criteria
- d. Any additional waiver of Part 50 and/or 58 regulatory requirements.

The ADEM's network assessment does not include any waiver requests that were not already included in the annual network plan submitted July 1, 2015, and approved by the EPA on November 19, 2015.

A thorough network assessment can help determine if a monitoring network continues to meet the monitoring objectives defined in 40 CFR Part 58 and is adequate to characterize the air quality in Alabama. We would appreciate the ADEM providing information addressing the 40 CFR Part 58, Appendix E siting criteria evaluations for all sites in the state. This can be included in the annual network plan due by July 1, 2016 or submitted separately as an addendum. We understand this will require coordination with the Alabama local agencies.

Thank you for your work to monitor air pollution and promote healthy air quality in Alabama and the southeast. If you have any questions or concerns, please contact me Gregg M. Worley at (404) 562-9141 or Darren Palmer at (404) 562-9052.

Sincerely,



Gregg M. Worley  
Chief

Air Analysis and Support Branch

cc: Laura Ackerman, SESD